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ABSTRACT

Although isolating the degree of association that exists between a teacher's specific knowledge and his or her particular classroom performance is extremely difficult at best, that is the focus of the knowledge and performance based instruments used in the evaluation of preservice English teachers in the University of Georgia teacher education program. Georgia teacher competency measures include a criterion referenced knowledge test (CRT) for teachers in their subject area (English or communicative arts--CA). It is subdivided into eight areas: logical reasoning, library research, composition, language, communications media and careers, literature, reading, and oral communications. A second assessment approach, the Teacher Performance Assessment Instruments (TPAI), includes a general set of teacher performance measures: teaching plans and materials, classroom procedures, and interpersonal skills. In a study conducted during the 1979-80 school year, student teacher candidates in English at the Universtiy of Georgia were observed using the instruments. The data were examined to determine how well the students performed on each test and on both tests together, and to determine what measures, if any, predicted their scores on these two statewide criterion measures. The analysis indicated that the low number of significant correlations between the two instruments confirms that they are assessing different competencies. (HOD)

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KNOWLEDGE AND PERFORMANCE ASSESSMENT OF PROSPECTIVE ENGLISH TEACHERS

Ramon Veal, Gale Hulme, & Robbie Butler

Three categories usually serve to classify the variables in research in teacher preparation: presage or background teacher characteristics, process or teacher behaviors and teacher-student interactions, and product or student outcomes.[1] The assumption here, of course, is that there are relationships among the variables, that one effects the others and is, in turn, influenced. Thus, the connections between these variables form the focus of much of the research in teacher education: presage-process, presage-product, and process-product.

Of the three, the last one, process-product, is probably the most important, the most complex, and the most difficult to investigate. Discovering a cause-effect relationship between particular teaching techniques and, say, evidence of increased coherence in student writing is therefore one of the "nearly impossible dreams" of research in English teacher effectiveness. If, however, even a tenuous connection could be found between specific teacher actions (process variables) and some important student learning (product variables), then presage-process research would increase even more in importance as a base for determining which teacher characteristics to look for in teacher selection or which to attempt to influence through training.

Simply isolating the degree of association that exists between a teacher's specific knowledge (presage variable) and his/her particular classroom performance (process variable) is extremely difficult at best.[2] Still, that is the focus of this report of the results of using knowledge and performance-based instruments in the evaluation of pre-service English teachers in the UGA teacher education program.

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Like many other states, Georgia has given allegiance to Competency-Based Teacher Education (CBTE) for more than ten years. But in 1979 the State Board of Education decided to eliminate all references to CBTE in its "Guidelines" for teacher education programs. This decade of CBTE commitment did, however, spawn the development of the evaluation instruments now in use and under scrutiny here. Their development and use have been exclusively the province of the Georgia Department of Education, external to the preparation program but with individual teacher and teacher educator assistance.[3] In effect, they are minimum competency tests of subject matter knowledge and classroom performance. They are current examples of a national trend that, according to a note in the September 1980 issue of Councilgrams, the southeast leads.

Georgia Measures

These instruments include a criterion-referenced knowledge test (CRT) for teachers in their subject area (English or Communicative Arts--CA). It is subdivided into eight areas: logical reasoning, library research, composition, language, communications media and careers, literature, reading, and oral communications.

Overall, its content validity claims come from English teacher "experts" who verified its objectives through planning committees and a job analysis survey. Sections or areas were validated further by means of intra-section item correlation studies.[4] Reliability checks also reached acceptable levels, .88 and .91.[5]

A second assessment approach, the Teacher Performance Assessment Instruments or TPAI, includes a general set of teacher performance measures: teaching plans and materials, classroom procedures, and interpersonal skills. These measures, mainly rating forms, include forty-five indicators based on fourteen objectives or competencies, ranging from "the teacher plans instruction (and) uses a variety of teaching methods" to "the teacher demonstrates enthusiasm (and) manages interaction." Numerous validity and reliability studies indicate that the instruments meet usual psychometric standards--coefficients ranging in the .80's.[6]

Figure 1--Categories in Georgia Measures

Criterion-Referenced Test--
Communicative Arts (CRT-CA)

1. Logical Reasoning
2. Library Research
3. Composition
4. Language
5. Communications Media and Careers
6. Literature
7. Reading
8. Oral Communications

Teacher Performance Assessment
Instruments (TPAI)

Teaching Plans and Materials

1. Plans instruction to achieve selected objectives.
2. Organizes instruction to take into account individual differences among learners.
3. Obtains and uses information about the needs and progress of individual learners.
4. Refers learners with special problems to specialists.
5. Obtains & uses information about the effectiveness of instruction to revise it when necessary.

Classroom Procedures

6. Uses instructional techniques, methods, and media related to the objectives.
7. Communicates with learners.
8. Demonstrates a repertoire of teaching methods.
9. Reinforces and encourages learner involvement in instruction.
10. Demonstrates an understanding of the school subject being taught & demonstrates its relevance.
11. Organizes time, space, materials, & equipment for instruction.

Interpersonal Skills

12. Demonstrates enthusiasm for teaching & learning and the subject being taught.
13. Helps learners develop positive self-concepts.
14. Manages classroom interactions.

Scores on these two sets of factors, eight areas of knowledge and fourteen performance objectives are herein compared for the purpose of finding out how much these knowledge and performance factors overlap (correlate) or, in fact, how independent each one is in assessing beginning teacher competence.

Further, since these presage or knowledge and process or performance measures are actually used in Georgia as criterion measures (necessary for professional certification), several predictor measures (NTE, GPA, and supervisor ratings) collected during student teaching are also correlated with CRT-CA/TPAI criterion scores and reported.

1979-1980 UGA Study

During the 1979-1980 school year, student teacher candidates (TC's) in English at UGA were observed using the TPAI, and they took the Georgia CRT-CA plus the indentified predictor measures. We asked several questions of the data collected. How well did our students perform on the TPAI? On the CRT? On the two measures together? What measures, if any, predicted their scores on these two statewide criterion measures?

UGA Scores

As Table 1 shows, UGA mean scores on the TPAI exceeded the state recommended score on each competency (scores reported in terms of a 1-5 scale). In fact, only a few TC's scored below the recommended score on only a few factors as shown in the raw data. Although three teacher candidates "failed" six to eight competencies, most TC's, 91 percent, performed satisfactorily on all of the competencies; and only one particular competency was a problem for as many as four TC's: organizes for individual differences.

Although no state-recommended score exists for the CRT-CA, statewide means can be reported and are listed in Table 2 along with local or UGA means. Scores are reported in terms of percentages of correct answers by section. There is no overall or total score.

Again, all UGA means exceeded statewide means. The margin of difference is

TABLE 1

Mean TPAI Scores for UGA TC's

TPAI Categories	Recommended Competency Score	UGA Average
I	3.00	3.96
II	3.00	3.53
III	3.00	3.90
IV	3.00	3.59
V	3.50	3.93
VI	3.00	3.96
VII	3.60	4.06
VIII	3.00	3.89
IX	3.00	4.01
X	3.00	3.72
XI	3.00	3.89
XII	3.33	4.20
XIII	4.00	4.51
XIV	3.50	4.39

TABLE 2

Mean CRT Scores for UGA TC's

CRT Sections	State Average	UGA Average
1. Logical Reasoning	66	69
2. Library Research	77	82
3. Composition	75	78
4. Language	76	78
5. Communications Media/Careers	84	86
6. Literature	66	70
7. Reading	81	87
8. Oral Communications	73	74

low, however, with a range of one percent to six percent and an average of only three percentage points. Communications Media/Careers and Reading yielded the highest scores, 86 & 87. Logical Reasoning and Literature provided the lowest scores, 69 & 70. Also, in terms of rank order, state & UGA means are almost identical. Further, as shown in the raw data, at least seven TC's scored below the state mean on each factor. Communications Media/Careers and Oral Communications proved to be difficult (scores below state average) for fifteen TC's. On the basis of these comparisons--UGA TC scores and state-recommended or state-average scores--the UGA program seems to check out better on performance than on knowledge assessments.

Relation Between Knowledge and Performance Scores

How did the UGA students perform on the two measures together? Since one, the CRT-CA, is a presage measure and the other, the TPAI, is a process measure, and since both are criterion measures for certification in Georgia, a study of their overlap or correlation is of primary importance.

When the fourteen TPAI competencies were correlated with the eight CRT-CA areas, only 12 of 112 combinations proved to be significant and only three of those were positive (see Table 3). Teachers' knowledge of the methodology of library research correlated with their communication with learners (clear and responsive), .38. Also, teachers' knowledge about oral communication correlated with their active collection and use of information about learners and instruction, .47 and .35. These associations, both specifically and generally, could have several different interpretations of the indicated relationships. One example suggests that those prospective English teachers who have mastered most of the procedures for scholarly research might also provide the clearest directions for students and respond most frequently to student questions. Further, those prospective English teachers who know the most about the nature and possibilities of oral communication are, possibly at the same time, the most likely ones to seek and to use feedback from students and the learning situation. Other interpretations are,

TABLE 3

Correlations Between Knowledge and Performance Measures

Performance Measures	1= Logical reasoning	2= Library Research	3= Composition	4= Language	5= Communications Media + Careers	6= Literature	7= Reading	8= Oral Communications
Plans for objectives								
Organizes for individual differences								
Obtains + Uses Information about learners								.47
Refers students to specialists								
Obtains & uses information about instruction								.35
Relates methods to objectives				-.50				
Communicates with learners		.38						
Uses a variety of methods			-.33	-.46		-.38		
Reinforces learner involvement				-.33	-.33			
Understands subject matter								
Organizes classroom environment								
Demonstrates enthusiasm			-.35	-.44				
Helps learners develop self concepts					-.33			
Manages classroom interaction								

NOTE: Only significant (.05) correlations reported; N=28.

of course, possible. Here, though, it is important to note that this teaching behavior, communicating clearly and responsively, has, in other studies, correlated with student achievement. This small number of positive relationships, however, indicates that, in general, the knowledge categories of the Georgia CRT-CA overlap very little with the performance categories of the TPAI.

Several negative relationships did show up, however. Knowledge tested by the composition, language, and literature sections of the CRT-CA negatively associated with the TPAI competency, "Uses a variety of methods."

These moderate but negative correlations (-.33, -.46, and -.38) might emphasize the importance of knowledge of the traditional three areas of English (language, literature, and composition), but these data do not reveal for sure whether it's the presence or the absence of that knowledge that really counts.

In the same manner, enthusiasm correlated negatively (-.35 and -.44) with knowledge of composition and language. In addition, two other performances, relating methods to objectives and reinforcing learner involvement, correlated negatively with the language area of knowledge, -.50 and -.33. And finally, the other two significant correlations (also negative) connected "knowing about communications media and careers" with reinforcing learner involvement (-.33) and with helping learners develop their self concept (-.33). Still, the negative correlation disguises whether more knowledge of media and careers, for example, is a certain asset or liability.

In all, these correlations between English teachers' specific knowledge and their general performances indicate that the levels of teacher knowledge of the subject areas of English (language, literature, and composition, but also library research, communications careers and media, and oral communications) are unrelated or possibly negatively related to important teacher behaviors like communicating with students, relating objectives and methods, using a variety of methods, etc. The figure below shows the uncorrelated or negatively correlated CRT & TPAI results.

Figure 2 -- High and Low Scores on the Georgia Criterion Measures

High CRT and High TPAI Scores	High CRT and Low TPAI Scores
6 TC's	4 TC's
Low CRT and High TPAI Scores	**Low CRT and Low TPAI Scores**
16 TC's	3 TC's

No CRT Scores High TPAI Scores

4 TC's

If anything is indicated by these data, it is that lower levels of tested teacher knowledge are likely to be linked to higher supervisor ratings of general performance.

Predictor & Criterion Measure Relationships

The correlations between typical predictor measures and these two Georgia criterion measures, the CRT and the TPAI, are both more numerous and more consistent, as shown in Table 4. As expected, NTE scores and grades are associated positively with almost all CRT factors and in a moderate range, .39 to .59. It is interesting to note that while one test of knowledge (NTE) and a knowledge indicator, grades, are associated positively with another knowledge test, the CRT, the two areas of the CRT not correlating are Communications Media/Careers and Oral Communications. They are perhaps the two areas of the CRT least represented in the NTE and in grades, and they were shown to be the most difficult for UGA TC's. These data correspond to those reported in the Butler study of a similar population two years ago. She cited correlations of .60 between "tested knowledge" and the CRT-CA and .46 between "academic success" and the CRT-CA.[7]

Other predictor measures listed in Table 4 include four component ratings from college and school supervisors, one college supervisor rating overall, and two general estimates regarding writing, again from the college supervisor. The ratings and writing estimates all correlate with the "logical reasoning" section of the CRT-CA, and the supervisors' estimate of the TC's writing ability correlates with all of the CRT areas except language and oral communications, the .30's to the .50's. The CRT associations with writing are reported here for the first time, but the Butler study (cited above) reported several contrasts: the same overall ratings with tested knowledge, -.58; with academic success, .05; and with the CRT-CA, -.26.

Except for the anomolous negative correlation of -.39 between the NTE Common Score and the TPAI "Variety of Methods" score, all other correlations cited in Table 4 are between professional ratings and TPAI competencies. There are many such correlations, and ratings of TC "Planning" and "Methods" together correlated with

TABLE 4

CORRELATIONS BETWEEN PREDICTOR & CRITERION MEASURES

	CRT								TPAI													
Predictor Measures	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NTE-EDU	39						51															
NTE-ENG.EXP.			56	53		52	45															
NTE-COM	42		57	43		52	49								-39							
NTE OPT (Eng)			65	52		49	47															
Overall GPA		51	64			59	41															
Super. Rating	54						40				29				44		41	30	36	29	34	44
Rating-Planning	43	36							31	32				46	54	46	55	39	52	50		42
Rating-Methods	53	32									35			36	43		42		30	35	44	42
Rating-Interact.	48																		31		31	51
Rating-Manage.	40														32		34				35	46
Writ. Ability	51	50	58	39		43	31															
Teach. Writing	38	38							55													

NOTES: Only significant (.05) correlations reported; decimals omitted. See Table 3 for names of criterion measues, N = 28.

all six of the behaviors/performances identified earlier as correlates of product measures or student achievement. Ratings of teacher-student interactions and classroom management also correlate with a few TPAI categories. Averaging in the .40's, these supervisor ratings are the strongest predictors of the general teacher performances.

In fact, the college supervisors' overall ratings moderately (.30's to .40's) predicted seven TPAI factors: refers students to specialists, communicates with learners, reinforces learner involvement, understands subject matter, organizes classroom environment, demonstrates enthusiasm, helps learners develop positive self concepts, and manages classroom interaction. Only two categories, "obtains and uses information" about learners and instruction, are not significantly correlated with any professional ratings.

Implications

Reviewing implications from these results for pre-service English teacher preparation, at least in Georgia is now in order. Considering the CRT and the TPAI as criterion measures, we note, first of all, that UGA TC's performed very well on the performance measures, except for one factor, "organizes for individual differences." Perhaps the implication here is simply that this generic competency, attending to individual differences, is either too difficult or too complex for some prospective teachers.

If a state wishes to certify or validate teacher knowledge as well as teacher performance, obviously it can do so; and in this case it has done just that in eight areas judged to be important by "experts" and determined to be job-related through an English teacher survey. At least for these TC's, areas like "composition" and "reading" seem to be managed well, but lower than average scores on communications media and careers and oral composition (and even the traditional language and literature categories) imply that increasing the TC's job-relevant knowledge could be a goal of the UGA teacher training program in English, not necessarily with the objective to make them better teachers but to

help them pass the test.

That the special knowledge areas of library research and oral communications correlate with "communicates" with learners and "uses information" about learners and instruction suggests a positive connection between a teacher's communications with students and his/her attention to the details of the communication process. Implications of this relationship include more questions than answers, but they do illustrate the importance of and need for further study of teacher-student communication.

Other, negative associations between tested knowledge and rated performance raise still another question: what possible explanation exists for the observed relationship between high or low scores in language/literature/composition knowledge and opposite scores on performance ratings of enthusiasm, variations in methods related to objectives, and reinforcement of learners? That is, is it really true that a high level of knowledge is not essential for empirically validated teacher "success"?

In summary, the low number of significant correlations between the CRT-CA and the TPAI confirm that these two instruments, one knowledge and one performance, are assessing different competencies. Further, nothing in the literature describing these instruments implies that they should correlate, that, in effect, the CRT predict successful teaching performance.[8] In short, no such claim has been made; and, as in the case of the NTE in South Carolina, the courts have allowed the use of a knowledge test as a required teacher assessment even though the concurrent or "in practice" validity of the test is not demonstrated.[9] Still, in the opinion of many educators, lay persons, and some lawyers, these knowledge tests will eventually have to pass a predictive validity test.[10] Whatever, in the meantime, NTE scores and grades are as useful as anything (.50's) in predicting success on the Georgia criterion test of knowledge, the CRT-CA. In this case, that's simply one presage measure predicting another one. Thus, the time and expense involved in taking more than one such test seems unnecessary.

In the study of other routine predictors of teacher performances, supervisors' ratings were shown to be the strongest presage measure (.30's - .40's) pointing to process variables that also correlate with the product variable, student learning. Specifically, the human judgment of one or more teacher candidate supervisors regarding planning and methods as well as classroom interaction and management forecasts teachers' later performance in such areas as organization of the classroom environment, communication with learners, and classroom management. The rating form used in this evaluation was described in an article appearing in the October 1979 issue of English Education.[11] A theme of that article, and a major implication here, is that the guided, subjective judgment of a knowledgeable professional can be as consistent and as helpful as a more elaborate and objective rating instrument.

Other examples of this parallel between an objective measure and a profesional judgment are the sets of correlations (.43 thru .53) between professional ratings and the "Logical Reasoning" section of the CRT-CA and between a professional rating of the TC's writing ability and his/her scores on six of eight CRT-CA sections.

A summary implication of the predictive validity of the UGA professional ratings is that their continued use not only maintains an emphasis on program objectives but also reflects the competencies of the state performance criteria. On the other hand, the knowledge required for a TC to "pass" the CRT-CA is not as apparent in the program as are the competencies required for the TPAI. A State Board of Education can, of course, require knowledge such as that called for by the CRT-CA; but since scores on it have not been related to student achievement or to teacher behaviors associated with student learning, such knowledge can be required only as a minimum requirement for becoming a licensed teacher, not as a basis to predict success as a teacher.

Programs like Georgia's, however, that make regular and extended use of professional ratings have little to fear when their graduates are evaluated by

carefully constructed and appropriate performance instruments.

NOTES

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